

ANDRAKOVÁ, J.; RAKOVIČ, M.; GREGORÁ, V.

Effect of radiation on ion metabolism in rat salivary glands.
Cas.lek.cesk. 103 no.11:295-298 13 Mr'64.

1. Biofyzikalni ustav fakulty vseobecneho lekarstvi KU v
Praze; prednosta: doc.dr. Z.Dienstbier.

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RAKOVIC, M.

"Adventures in radioisotope research; the collected papers of Georges Hevesy". Reviewed by M. Rakovic. Chem listy 57 no.1:79 Ja '63.

Z/055/62/CCC/C04/006/006
D291/D301

AUTHOR: Raković, Miloslav

TITLE: The use of neutron activation analysis for determining admixtures and impurities in reactor materials

PERIODICAL: Jaderná energie, no. 4, 1962, 127 - 130

TEXT: This article, compiled from Western sources, describes the application of neutron-activation analysis for determining admixtures and impurities in zirconium, zirconium alloys, aluminum, graphite, steel, and other materials used in reactor engineering. So far, over 20 elements were discovered as possible admixtures and/or impurities in reactor materials, and the use of neutron-activation analysis is expected to contribute largely to the development and improvement of reactor-material purity tests. There are 1 table and 28 references: 4 Soviet-bloc and 21 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: R.C. Koch: Activation Analysis Handbook. New York 1960; D. Storminger, J.M. Hollander, G.T. Seaborg:

Card 1/2

Z/038/62/000/004/006/006

D291/D301

The use of neutron activation ...

Reviews of Modern Physics 30 (1958), pp 585 - 904; W.D. Mackintosh, R.E. Jervis: Anal. Chem. 30 (1958), pp 1180 - 1182; T. Westermark - I. Fine-man: Proc. Intern. Conf. Peaceful Uses Atomic Energy, 2nd, Geneva 1958, 28, 506 - 510. (Technical Editor: M. Komárka).

ASSOCIATION: Katedra lékařské fyziky a nukleární medicíny fakulty všeobecného lékařství Karlovy univerzity, Praha (Department of Medical Physics and Nuclear Medicine, Faculty of General Medicine, Charles University, Prague)

Card 2/2

RAKOVIC, Prvoslav, inz.

Introduction and promotion of cooperation between various enterprises in Yugoslavia and with foreign firms. Tekhnika Jug 17 no.12:2221-2229 D '62.

1. Generalni direktor preduzece "Crvena zastava", Kragujevac.

RAKOVIC, V.

Y

CSB

SIMIC, B.S.; MARKOVIC, R.; RAKOVIC, V.; TODOROVIC, P.

Federal Institute of Health (Federalni zdravotnický ústav), Belgrade;
Institute of Hygiene, Medical faculty of the university, Belgrade

Prague, Ceskoslovenska Hygiena, No 3, 1963, pp 129-136

"Influence of Diets with Different Fat Content on the Status of Nutrition"

SIMIC, B. S.; STOSIC, S.; RAKOVIC, V.; LAZOVIC, Z.; MARKOVIC, R.; NIKOLIC, D.;
LALOVIC, O.; DOMANOVIC, M.

Nutrition and nutritional conditions of female students in the home
"Vera Blagojevic". Hemoglobin, total serum proteins and hematocrit
as indices of nutritional conditions. Glas. hig. inst. 9 no.3/4:51-57
JL-D '60.

(NUTRITION SURVEYS) (HEMOGLOBIN) (BLOOD PROTEINS)
(BLOOD CELLS) (STUDENTS)

SIMIC, B. S.; MARKOVIC, R.; STOSIC, S.; NIKOLIC, D.; LAZOVIC, Z.; RAKOVIC, V.;
LALOVIC, O.; DOKMANOVIC, M.

Nutrition and nutritional status of students. Some body characteristics
resulting from different forms of nutrition. Higijena 13 no.2:113-122
'61.

(NUTRITIONAL SURVEYS) (BODY WEIGHT)
(BODY HEIGHT) (STUDENTS)

SIMIC, B.S.; MARKOVIC, R.; SIMIC, A.; RAKOVIC, V.; TODOROVIC, P.

Effect of hyper- and hypocaloric diets prepared on vegetable oil, margarine and lard on the level of cholesterol phospholipids and total lipids in the blood and on the blood pressure in the elderly. Acta med. jugosl. 17 no.2:211-228 '63.

S

SIMIC, Bozidar S.; RAKOVIC, Vera M.

Somatic, chemical and function characteristics of miners' diets containing animal and vegetable fat substances. Srpski arh. celok. lek. 89 no.5:563-576 My '61.

1. Higijenski institut Medicinskog fakulteta Univerziteta u Beogradu.
Upravnik: prof. dr Miomir Savicevic.

(FATS nutrition & diets) (MINING)

BAKOVIC, I.

See: Journalistic o the Czechoslovak Tatra 111 truck.

P. 102 (Part 1) Zagreb (Fedor, Yugoslavia) No. 2/5, Mar. 1, 1951.

D: Monthly Index of East European Acquisitions (MAI) 19 Vol. 7, no. 5, 1952.

RAKOVIC, Z.

"Contemporary development in the electric equipment of motor vehicles."

p. 52 (Svet Motoru) Vol. 12, no. 2, Jan. 1958
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4.
April 1958

RAKOVICH, A.M., inzh.

Prevention of false actions caused by wire breaks in the differential
lateral protection of parallel lines. Elek.sta. 29 no.5:60-62 My '58.
(MIRA 12:3)

(Electric lines)

RAKOVICH, A.M., inzhener

Behavior of differential protection with quickly saturable current
transformers during sustained short circuits. Elek.sta.26 no.9:
38-39 S'55.

(MLRA 8:12)

(Electric transformers)

ZEYLIDZON, Ye.D., inzhener; ALEKSANDROV, I.N., inzhener; DERYUGIN, P.P., inzhener;
GALAKTIONOV, A.S., inzhener; RYVKIN, O.L., inzhener; KUCHKOV, A.Ye.,
inzhener; RAJOVICH, A.M., inzhener.

Simplification of relay protection. Elek.sta. 27 no.2:40-48 P '56.
(MLRA 9:6)

- 1.Tekhnicheskoye upravleniye Ministerstva elektrostanstii (for Zaylidzon)
- 2.Belorussenergo (for Aleksandrov).3.Chelyabenergo (for Deryugin).
- 4.Lenenergo (for Galaktionov, Rybkin).5.L'vovskiy energokombinat (for Kuchekov, Rakovich).

(Electric relays)

AID P - 3617

Subject : USSR/Power Eng
Card 1/1 Pub. 26 - 11/30
Author : Rakovich, A. M., Eng.
Title : Performance of a short-circuit differential protection device with rapidly saturable current transformers
Periodical : Elek. sta., 9, 38-39, S 1955
Abstract : The operation and feeding of saturable transformers used for protection against complete short-circuits is discussed. The saturation curves for various short-circuit conditions are given. One diagram.
Institution : None
Submitted : No date

PAKOVICH, B.I.

PAKOVICH, B.I.

On the impossibility of the formation of defensive-motor conditioned reflexes in the case of strictly synchrotronous action of an indifferent and unconditioned stimulus. Dokl.AN SSSR 111 no.1:225-227 M-D
'56. (MLRA 10:2)

1. Fiziologicheskaya laboratoriya Akademii nauk SSSR. Predstavлено
академиком L.A.Orbeli.
(CONDITIONED RESPONSE)

RAKOVICH, I.I., inzh.

Classification of rooms exposed to explosions. Prom.energ. 14 no.2:29-31
(MIRA 12:3)
F '59.

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Factories--Safety measures) (Electric engineering)

RAKOVICH, I.I.; VENETSIANOV, Ye.A.; NAYFEL'D, M.R.; MOVSESOV, N.S.;
BOL'SHAM, Ya.M.

Problem concerning the use of cable fittings and wires with
aluminum strands in class V-Ia areas with explosion hazard
conditions. Prom. energ. 15 no.8:38-44 Ag '60. (MIRA 15:1)

1. Gosudarstvennyy institut azotnoy promyshlennosti (for Rakovich).
2. Vsesoyuznyy trest po elektrifikatsii promyshlennyykh pred-
priyatiy tsentral'nykh rayonov SSSR (for Venetsianov, Nayfel'd).
3. Glavnoye upravleniye po proizvodstvu elektromontazhnykh
rabot Minstroya RSFSR (for Mozesov). 4. Gosudarstvennyy
proyektnyy institut tyazheloy elektricheskoy promyshlennosti
(for Bol'sham).

(Electric wiring--Safety measures)

ALEKSEYeva, G.Ye., kand. tekhn. nauk, dots.; NELESHEKINA, L.P., dots., kand. tekhn. nauk; BALUYEV, V.Z., inzh.; SAMDAS, A.M., prof., doktor tekhn. nauk; VENIKOV, V.A., prof., doktor tekhn. nauk; YEZHKOv, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GORFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.P., dots., kand. tekhn. nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIM, P.G., inzh.; NEKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIg, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKE, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red.; GOLOVAN, A.T., prof., rei.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

ALEKSEYEVA, G.Ye.---- (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva, Energiia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. Moscow. Energeticheskiy institut. 2. Moskovskiy energeticheskiy institut (for Golevan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent All SSR (for Petrov).

RAKOVICH, I.I.

Problems of explosion prevention. Prom. energ. 1/ nov.3:32-60 Mr
'64. (MIRA 17:4)

RAKOVICH, I.I., inzh.

Electric motors with large power ratings for explosion hazardous premises of the chemical industry. Prom. energ. 19 no.1:36-37
Ja '64. (MIRA 17:2)

RAKOVICH, I.I.

Explosion-protected electrical equipment for explosion
hazardous processes in the chemical industry. Zhur. VKHO
7 no.6:619-625 '62. (MIRA 15:12)

(Chemical industries--Safety measures)
(Electric machinery--Safety appliances)

RAKOVICH, I.I., inzh.

Electric-lighting problems and selection of illuminants for
industries exposed to explosion hazards. Prom. energ. 13
no.9:27-29 S '58. (MIRA 11:10)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Electric lighting)

RAKOVICH, I.I.

Selecting types and specifications of electric motors for
explosion-hazardous industrial processes. Prom.energ. 15
no.5:46-51 My '60. (MIRA 13:7)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Electric motors)

RAKOVICH, I.I.

Classification of premises adjacent to explosion hazards. From.-
energ. 16 no.6:39-41 Je '61. (MIRA 15:1)
(Industrial safety)

RAKOVICH, I.I.

"Explosionproof electrical equipment" by V.A. Khorunzhii, IU.M.
Ribas, and S.S. Nedosekov. Reviewed by I.I. Rakovich. Prom,
energ. 18 no.6:61 Je '63. (MIRA 16:7)

(Khorunzhii, V.A.) (Ribas, IU.M.) (Nedosekov S.S.)
(Electric apparatus and appliances--Safety measures)

RAKOVICH, I.I.

"Explosionproof electric equipment" by G.A. Gel'fer, A.V.
Ivanov, IA.G. Medvedev, Reviewed by I.I. Makovich. Prom.
energ. 16 no.4:51-52 Ap '61. (MIR 14:9)
(Petroleum industry--Electric equipment)
(Gas industry--Electric equipment)
(Gel'fer, G.A.) (Ivanov, A.V.)
(Medvedev, IA.G.)

RAKOVICH, I.I., inzh.

Requirements of large-scale chemical industry from explosionproof
electric motors. Prom. energ. 17 no.8:28-31 Ag '62. (MIRA 16:4)
(Electric motors—Safety measures)(Chemical industries—Electric equipment)

GREYSUKH, M.V.; YERMILOV, A.A.; ZALESSKIY, Yu.Ye.; KAZIMOV, A.A.;
KATSEVICH, L.S.; KIRPA, I.I.; KIREYEV, M.I.; KNYAZEVSKIY,
B.A.; KOFMAN, K.D.; KRZHAVANIK, L.V.; KUZNETSOV, P.V.;
MOROZOV, K.S.; RAKOVICH, I.I.; RYABOV, M.S.; SVENCHANSKIY,
A.D.; SOKOLOV, M.M.; SYCHEV, L.I.; TVERDIN, L.M.; KHEYFITS,
M.E.; SHULIMOV, Ye.V.; EPSHTEYN, L.M.; SHCHEGOL'KOV, Ye.I.;
TSAPENKO, Ye.F.; FEDOROV, A.A., *glav. red.*; SERBINOVSKIY, G.V.,
red.; BOL'SHAM, Ya.M., *red.*; BRANDENBURCKAYA, E.Ya., *red.*;
TVERDIN, L.M., *red.*; FRIDKIN, L.M., *tekhn. red.*

[Handbook for power engineers of industrial enterprises in
four volumes] Spravochnik energetika promyshlennykh pred-
priatii v chetyrekh tomakh. Moskva, Gosenergoizdat.
Vol.2. [Electric-power supply (conclusion), use of electric
power and electrical equipment in some branches of industry]
Elektrosnabzhenie (okonchanie), priemniki elektroenergii i
elektrooborudovanie nekotorykh otraspeli promyshlennosti. Pod
obshchei red. A.A.Fedorova (*glav. red.*), G.V.Serbinovskogo i
IA.M.Bol'shama. 1963. 880 p. (MIRA 16:7)
(Power engineering—Handbooks, manuals, etc.)
(Electric power distribution)

RAKOVICH, I.I., inzh.

Principal changes and additions to regulations governing the
"Electrical equipment of explosion-hazardous systems." Prom.
emerg. 18 no.5:43-46 My '63. (MIRA 16:6)

(Electric apparatus and appliances—Safety regulations)

RAKOVICH, I.I.

New rules for manufacturing explosion-proof electric equipment
(PIVE). Prom.energ. 15 no.6:51-52 Je '60. (MIRA 13:?)
(Electric machinery industry)

KHORUNZHIY, V.A., red.; RIBAS, Yu.M., red.; BORISEVICH, Z.S., red.;
VERTYACHIKH, V.G., red.; KOST'YEV, N.K., red.; MOVSESOV, N.S.,
red.; ZHIGULIN, Yu.V., red.; RAKOVICH, I.I., red.; RUVINSKIY,
V.A., red.; TULIN, V.S., red.; FETISOV, P.A., red.; FILIMONOV,
P.V., red.; IGLITSYN, I.L., red.; LARIONOV, G.Ye., tekhn.red.

[Rules for the manufacture of explosion-proof electric equipment]
Pravila izgotovleniya vzryvozashchishchennogo elektrooborudovaniya.
Moskva, Gos.energ.izd-vo, 1960. 54 p. (MIRA 13:11)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po avtoma-
tizatsii i mashinostroyeniyu.
(Electric apparatus and appliances)

RAKOVICH, I.I.

AUTHOR: N.M.

90-58-7-8/8

TITLE: All-Union Scientific and Technical Conference on the Electric
al Equipment in Buildings and Outside Installations Liable to
Explosions (Vsesoyuznoye nauchno-tehnicheskoye soveshchaniye
po elektrooborudovaniyu vzyroopasnykh pomeshcheniy i naruzh-
nykh ustanovok)

PERIODICAL: Energeticheskiy Byulleten', 1958, Nr 7, pp 29-33 (USSR)

ABSTRACT: The conference was held from 14-19 April 1958 in Stalingrad and was convened by the Gosplan SSSR (State Planning, USSR) jointly with the Nauchno-tehnicheskoye obshchestvo energeticheskoy promyshlennosti (Scientific and Technical Society of the Power Industry), the Moskovskiy dom nauchno-tehnicheskoy propagandy im. F.E. Dzerzhinskogo (Moscow House of Scientific and Technical Propaganda imeni F.E. Dzerzhinskogo), Gosudarstvennaya inspeksiya po promyshlennoy energetike i energonadzora MES (State Inspection of Industrial Power and Power Supervision of the MES) and Institut Giproniselektroshakht. A total of 590 people took part in the conference and 36 reports were read including: V.S. Tulin, "State and 1959-1965 Development Plan for Research Work, Construction Projects and Production of Explosion-Proof Electrical Equipment and the Problems of

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90-5B 748/8

All-Union Scientific and Technical Conference on the Electrical Equipment
in Buildings and Outside Installations Liable to Explosions

Co-ordinating this Work"; V.Ye.Uleshchenko, "a.M.Bol'sham,
I.I. Rakovich "The Requirements in Electrical Equipment for
Buildings Liable to Explosions"; representative of the Plants
KHEMZ, Elektrosila and imeni Kalinin "Designing Single Series
of Hermetic Electric Motors"; P.F. Kovalev, "The Use of Elec-
tric Power in Gas and Dust Infested Buildings, and the Plan-
ning of Common Rules for Preparing Electrical Equipment for
Installations Liable to Explosions"; A.F. Pankrat'yev "Elec-
tric Motors for Buildings Liable to Explosions. According
to Foreign Data"; P.A. Kolodochka, "Transformer Sub-stations
Liable to Explosions"; N.N. Yudin, "Low Voltage Apparatus for
Mines and Factory Installations Liable to Explosions"; A.S.
Tsibarov, "High Tension Compartments for Buildings Liable to
Explosions"; L.A. Sal'tsevich and A.S. Zusman, "Electric Light-
ing Equipment for Buildings Liable to Explosions". The case
for explosion-proof electrical equipment in the oil and gas
industries was put forth by: V.Ye. Obrenskiy (Novokuybyshev
Oil Refinery), Ye.A. Venetsianov (Tsentrtelektronmontazh),
N.S. Movsesov (Glavtelektronmontazh), B.A. Delibash (Tsentr-

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90-5847-8/3

All-Union Scientific and Technical Conference on the Electrical Equipment
in Buildings and Outside Installations Liable to Explosions

elektromontazh), M.F. Shidlovskiy (Giproneftezavod), V.V. Peyve (Giproneftezavod), P.I. Polikarpov (Syzran' Oil Refinery), A.Ya. Berg (Kuybyshev Oil Refinery) and A.A. Blekhman (Lengiprogaz). The work of investigatory organizations such as MakNII, VosNII, TsNII UPO and Giproniselektroshakht was summed up and the conference agreed that the electrical industry had failed in developing better explosion-proof equipment. Specific defects in machinery and installations, and also some improvements, are mentioned. The article lists proposals agreed on by the conference and intended for the guidance of plants of the electrical industry and research and experimental organizations during the 1959-1965 period.

Card 3/3

1. Electrical equipment—Conference 2. Electrical equipment
—Hazards 3. Electrical equipment—Safety measures

USCOMM-DC-55,134

AUTHOR: Rakovich, I.I. (Engineer) SOV/FBI-12/11

TITLE: Problems of electric lighting and the selection of lighting fittings where there is risk of explosion. (Voprosy elektricheskogo osveshcheniya i vybor svetil'nikov dlya vzryvoopasnykh preizvedenii.)

PERIODICAL: Promyshlennaya Energetika, 1958, No.9. pp. 27-29

ABSTRACT: This article assumes a detailed knowledge of the different Soviet Standard categories of explosive atmosphere and of the different types of lighting fitting available. In lighting refineries, and other industries where there may be an explosive atmosphere, the most difficult requirements are met in two storey compressor and pump buildings which may be 200 m long, 20 m wide and 20 m high. The usual system of general and local lighting is described and reference is made to the use of portable lamps. The different kinds of fittings that can be used with lamps of different wattages in various categories of explosive atmosphere are then discussed. It is particularly difficult to provide a sufficiently high level of general lighting in high rooms because there are no flameproof fittings for high power lamps of say 500 watts. It is very necessary that the electrical industry should develop a standard series of explosion proof fittings. It may be necessary to have two types of fittings according to the category of gas and a proposed series is given in Table 1. Similar considerations may be applied to the standardisation of fittings that are explosion-resistant and a suggested series for lamps of different power is

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Problems of electric lighting and the selection of lighting fittings where there
is risk of explosion. SOV/04-58-0-12/30

different categories of explosive atmosphere is given in Table.2. Constructional requirements of the fittings, such as the ability to resist corrosion are stated. In certain types of atmosphere the use of dust proof fittings is permitted, but none such are available for 500 W lamps. Emergency lighting fittings are considered. There are 2 tables.

ASSOCIATION: GIAP

1. Lighting equipment--Selection
2. Explosive gases--Hazards
3. Explosive gases--Safety measures

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RAKOVICH, I.I., inzhener.

Electric motors for operations where explosions may occur. Prod.
energ. 12 no.5:1-3 My '57. (MLB 10:6)
(Electric motors)

AUTHOR: Rakovich, I.I., Engineer

94-4-1/25

TITLE: The Selection of Construction and Type of Electric Motor
for Use when there is Risk of Explosion (Vybor ispolneniy
i tipov elektrodvigateley dlya vzryvoopasnykh proizvodstv)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.4,
pp. 1 - 4 (USSR).

ABSTRACT: The uses of different types of enclosure for electric motors is first discussed in general terms, mentioning combinations of explosive and corrosive atmospheres. The most reliable types of motor for use in explosive atmospheres are those with forced ventilation. In premises where the explosion risk is rated as class B-I or B-II, medium and large squirrel-cage motors of 125 - 3 500 kW with forced ventilation are suitable. An additional requirement for this class of work is that the terminals should be flameproof. It is difficult to make flameproof terminals on motors of this class; they also may have forced ventilation. Electric motors constructed in this way should be denoted $\Pi\text{O}\Delta$, where the letter Π indicates forced ventilation by excess air-pressure, O denotes the absence of other types of flameproof parts and A, B, G and Δ denote the class of the explosive mixture.

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Q-4-1/35

The Selection of Construction and Type of Electric Motor for Use
when there is Risk of Explosion

Where the explosion risk is rated as class B-Ia or B-IIa, motors of the types described above may be used; motors of the same types but having closed-circuit ventilation through air coolers are also recommended, particularly with atmospheres of groups Γ and Δ . When the number of motors is small and they do not exceed 300 - 400 kW each, they may be ventilated before starting by a common ventilating set. It should operate continuously and deliver air to the motor all the time that it is working. The explosion-protection arrangements for the slip-ring enclosures are not necessarily the same as for the rest of the motors. Motors constructed in the way described may be denoted $\Pi_3 CA$, $\Pi_3 C\Delta$, where Π_3 denotes closed-cycle

forced ventilation through an air cooler, C indicates that parts such as the slipring enclosure are of special construction and the remaining letter designates the groups of the explosive atmosphere.

Special problems arise with 3 000 r.p.m. synchronous motors series CTM, in which the exciter is driven by the main shaft through a flexible coupling and may be solidly connected to the machine field. The exciter is usually of the open

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94-4-1/25

The Selection of Construction and Type of Electric Motor for Use
when there is Risk of Explosion

construction but when the motors are of the gas-protected form, it is provided with a cover and forced ventilation. Forced ventilation is also provided for the sliprings. Gas-protected motors, series CTM, are made with outputs ranging from 1 500 - 6 000 kW. The commonest type of premises with explosion risk are in class B-Ia, for which there is quite a wide range of industrial electric motors suited to flame-proofing. Large motors of more than 500 - 600 kW should always be provided with forced ventilation, particularly for premises with explosive mixtures of groups Γ and Δ ; alternatively, they should have closed-cycle cooling with air coolers. For slow-speed synchronous motors, the latter is preferred from the manufacturing point of view.

Different types of motors that can be installed with different classes of explosion risk are then discussed. Only a small range of motors up to 100 kW are suitable where there is risk of fire or explosion: the production of such motors should be expanded. The motors that are now manufactured of series MA-140, MA-36, KO, KOM, TAF are intended for atmospheres of methane and coal dust, i.e. for mines, and are denoted PB, meaning "for mining service". Only motors series KO, KOM and

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94-4-1/25

The Selection of Construction and Type of Electric Motor for Use when there is Risk of Explosion

TAT can be manufactured for premises where the explosion risk is of class 25; they are denoted B-25. For atmospheres class 3- Γ , the notation is B3 Γ .

Motors of the PB construction can also be used with atmospheres 1A (ammonia, methane) and are denoted B-1a. It follows that for explosion risks in class B-I and B-II, the range of motors is sufficient only for atmosphere 1A, in which all mining-type motors denoted PB may be used. There is much less choice of motors for atmospheres 2-A, 16 and 25 and there is a still smaller range of motors for atmospheres 3A, 36, 1 Γ , 2 Γ and 3 Γ .

For atmospheres of category 4 and also group Δ of explosive mixtures, flameproof motors cannot be built because of the difficulty of making and maintaining the necessary gaps and of limiting the temperature rise. In such cases, the motors must be installed in different premises. Steps may also be taken to improve the class of explosion risk of premises, for example, by better ventilation.

AVAILABLE: Library of Congress
Card 4/4

KHORUNZHII, V.A.; RAKOVICH, I.I.; SHVYCHENKO, N.F.

In the working group of section No.10 of the Regular Committee
of the Mutual Economic Assistance Council for preparing re-
commendations on uniform rules and standards on explosionproof
electrical equipment. Prom.energ. 19 no. 2:50 F '64.
(MIRA 17:5)

RAKOVICH, I.I., inzh.

Selection of types and make-up of electric motors for explosion-hazardous applications. Prom.energ. 13 no.4:1-4 Ap '58.
(MIRA 11:4)

(Electric motors)

RAKOVICH, I. I., inzhener.

New regulations for electric equipment in explosion-hazardous locations. Prom. energ. 11 no.10:1-5 0 '56. (MIRA 9:11)

1. Gosudarstvennyy institut zashchity promyshlennosti.
(Electric engineering--Safety measures)
(Industrial safety)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001344

Ref ID: A6563
Revised, July, 1988.

Classification from Secondary Vigilante Measure Against Security.
Natl. Enrgy, 80 no.883-67 (8/88).

(MIRA 1988)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013441

S/034/60/000/005/003/003
E194/E584

AUTHOR: Rakovich, I. I.

TITLE: The Selection of Type and Construction of Electric Motors for use Where There is Risk of Explosion

PERIODICAL: Promyshlennaya energetika, 1960, No.5, pp.46-51

TEXT: At the present time, considerable attention is being devoted to the use of standard induction motors, with slight modifications if necessary, in places subject to risk of explosion. Modifications of standard series motors are being produced with protection against explosion risk, thus increasing the range of motors suitable for use in premises with risk of explosions. The conditions of formation of explosive mixtures vary widely and so the degrees of explosion risk in various premises also differ. The conditions depend mainly on methods of production and also on physical and chemical properties of the gases and vapours and on the preventive measures that are taken. The main factors of the method of production are whether the explosive material is stored or worked in open or closed spaces, whether the method of production involves high temperatures and pressures, and on the methods of operating and

Card 1/4

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S/094/60/000/005/003/003
E194/E584

The Selection of Type and Construction of Electric Motors for use
Where There is Risk of Explosion

loading and unloading the reaction vessels. The main physical and chemical properties of the gases and vapours that influence the risk of explosion are the following. The specific gravity of the gases and vapours is important because it governs whether they fall to ground level where the motors are usually located or rise, usually out of harms way. The flashpoint of vapours is obviously important. The self-ignition temperature of explosive mixtures is important, the rules classify explosive mixtures into four groups of increasing degree of danger: group A - with self-ignition temperature greater than 450°C, group B - of 300 to 450 °C, group C - of 175 to 300°C, and group D - of 120 to 175 °C. According to the rules permissible temperatures for parts of explosion-protected equipment that come into contact with the explosive medium are for group A - 200°C, group B - 155 °C, group C - 105 °C and group D - 80°C. In practice most parts do not reach the dangerous temperatures except possibly the rotor cages of induction motors. The class of explosive mixture also governs the strength of frame and the size of gap to be left

Card 2/4

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The Selection of Types and Construction of Electric Motors for use
Where There is Risk of Explosions

between flanges. A few additional types of explosion mixtures
are also of importance. Toxicity is also very important if the
toxic concentration is high enough. The explosive concentration,
the prophylactic measures required and the like that are
required will usually depend on the toxicities. Data for all these
physical and chemical properties of various substances and mixtures
of gases are given in the tables of physical properties of gases or mixtures.
Gases and vapours are classified according to degree of explosion
risk in Table 2.1. In calculating explosion risk it is necessary to
consider the properties of both the raw materials and the finished
product being made. Ethylene, ammonia and in the
production of acetylene, chlorine, benzene, etc. Peroxides with
explosion risk are mainly determined by the risk of production
factors and details about the production conditions are given. At some
points

Card 3/4

Q

The Selection of Type and Construction of Electric Motors for use
Where There is Risk of Explosions
Part II - Protection by Series reference
length in Table 3

ASSOCIATION: GIAP

10

Card 4/4

RAKOVICH, I.I.

Electrical equipment of chemical plants. Prcm.energ. 16
no.10:40-43 O '61. (MIRA 14:10)
(Chemical industries--Electric equipment)

RAKOVICH, I.I.

Use of foreign electrical equipment in chemical industries
presenting explosion hazards. Zhur. VKHO 9 no. 3:314-319 '64.
(MIRA 17:9)

KABOVICH, Ivan Iosifovich; BUL'YEV, Ya.I., red.

[Electrical equipment of premises with explosion hazards]

Elektrooborudovanie vzryvoopasnym proizvodstv. Moskva,
Energiia, 1964.. 397 p. (MIRA 17:10)

RAKOVICH, M. [Rakovic, M.]; GREGORA, V.

Excretion of radiosodium in rats following total irradiation.
Med. rad. 8 no.7:68-71 Jl '63. (MIRA 17:1)

1. Iz fakul'teta obshchey meditsiny Biofizicheskogo instituta
Karlova universiteta, Praga.

L 20847-66 EPF(n)-2/EWA(h)/EWT(m)/EWP(t) IJP(c) JD

ACCESSION NR: AP5024263

CZ/0043/64/000/009/0669/0675

AUTHOR: Rakovic, M. (Rakovich, M.) (Engineer) (Prague); Talpova, H. (Talpova, G.) (Prague)

TITLE: Nondestructive determination of phosphorus³¹ in various types of animal tissues by means of the neutron activation analysis 14
19,44-15 B

SOURCE: Chemicke zvesti, no. 9, 1964, 669-675

TOPIC TAGS: nondestructive test, analytic chemistry, phosphorus, histology, biochemistry, neutron flux, neutron, geiger counter, radiation chemistry

Abstract [Authors' German summary, modified]: The nondestructive determination of phosphorus in animal tissues is based on a twenty-hour long activation produced by a flux of neutrons of 1.5×10^{12} by cm^{-2} by s^{-1} , and on the direct measurement of the pulse frequency by the Geiger-Müller counter, following a 14-day period of decay. Samples may weigh no more than 0.03 milligram.. Orig. art. has 4 graphs and 1 table.

ASSOCIATION: Katedra lekarske fyziky a nuklearni mediciny, Fakulta všeobecného lekarství, Karlovy univerzity, Prague (Department of Medical Physics and Nuclear Medicine, Faculty of General Medicine, Charles University)
Card 1/2

L 20847-66

ACCESSION NR: AP5024263

SUBMITTED: 16Jan64

ENCL: 00

SUB CODE: LS, MP

NO REF Sov: . 000

OTHER: 007

JPRS

Card 2/2 Jo

RAKOVICH, M. [Rakovic, M.]; GREGORI, V.; VENIGOV, G. [Venigov, G.]
Excretion of chlorine ions by irradiated rats. Radiobiologija (Leningrad) (MIRA 38:4)
no.5:782-783 '64.

J. Biophysicheskiy institut fakulteta chelovekoy meditsiny Karlova
universiteta, Praha.

SIMICH, S. [Simic, S.]; RAKOVICH, V. [Rakovic, V.]; MARKOVICH, R.
[Markovic, R.] (Belgrad, Jugoslaviya)

Effect of vegetable fats and solid hydrogenated vegetable fat
on the content of cholesterol, phospholipids, and total lipids
in the blood serum of various population groups. Vop.pit. 20
no.3:28-33 My-Je '61. (MIRA 14:6)
(CHOLESTEROL) (LIPIDS) (FATS)

VOLKOV, B.D., inzh., PAKOVICH, V.I., inzh.

Drum method for grinding and polishing parts for electroplated coatings.
Mashinostroenie no.3:74-77 My-Je '62. (MIRA 15:7)

1. TSentral'noye konstruktorsko-tehnologicheskoye byuro velenstroyeniya,
Khar'kov.
(Grinding and polishing) (Electroplating)

RAKOVITSAN, A. P., KAND. TEKHN. NAUK

ROKHLIN, I. A., INZH. INSTITUT STROITEL'NOY TEKHNIKI AKADEMII ARKHITEKTURY USSR

ISSLEDUVANIYE RABOTY IZGIBAYEMYKH ELEMENTOV Iz TONKOSTENNOY PUSTOTELOY KERAMIKI. PAGE 37

SO: SBORNIK ANNOTATSII NAUCHNO-ISSLEDOVATEL'SKIH RABOT PO STROITEL'STVU, MOSCOW 1951

L 16801-63

EWT(1)/BDS/ES(j) AFFTC/ASD AR/K

ACCESSION NR: AP3004277

8/02/63/008/007/0068/0071

56
55

AUTHOR: Rakovich, M.; Gregora, V.

TITLE: Radiosodium excretion in rats after total irradiation

SOURCE: Meditsinskaya radiologiya, v. 8, no. 7, 1963, 68-71

TOPIC TAGS: sodium excretion, total irradiation, Na, sodium

ABSTRACT: This investigation was carried out because other studies contradict one another. Edelman describes an increase in sodium excretion and Bowers and Scott describe a decrease. Three groups of rats were totally x-irradiated by a "Makrofos" unit in doses of 1000, 600, and 200 r. 24 hrs prior to irradiation the animals were injected intraperitoneally with 2 microcuries of Na²² in a 0.2 ml physiological solution. After irradiation the animals received their normal rations of food and water. A large volume gamma detector (constructed by the Institute) with six Geiger-Mueller tubes was used to determine total activity of the animals. Urine and feces were collected daily. A large volume counter was used to measure the activity of urine samples. The feces were weighed, burned, and activity was measured with a Geiger-Mueller end-window counter. It was

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L 16801-63

ACCESSION NR. AP3004277

found that after total α -irradiation excretion of Na^{22} for 600 and 1000 r doses is significantly retarded, but it is not retarded for 200 r. In the urine the change in Na^{22} excretion is caused by its considerable retardation. In the feces the daily amount of sodium excreted is much smaller than in the urine because of the general decrease in feces excretion after irradiation. The author agrees with the findings of Bowers and Scott, but not with their explanation. Bowers and Scott theorize that the organism has the capacity to regulate kidney excretions when there is significant sodium loss resulting from diarrhea. But this is contrary to the findings of this investigation because the sodium excreted with the feces does not increase. The author points out that the organism does not receive sodium after irradiation because of loss of appetite and this may be an important factor. The effect of loss of appetite, the capacity of the organism to regulate kidney excretion, and sodium concentration in the blood plasma should be determined for further clarification of decreased sodium excretion after irradiation. Orig. art. has: 4 tables, 3 figs.

ASSOCIATION: Fakul'tet obshchey meditsiny Biofizicheskogo instituta Karlova Universiteta, Prague (General Medicine Faculty of the Biophysics Institute of Charles University)

Card 2732

FEDOTOVA, T.I., doktor sel'skokhozyaystvennykh nauk; KARASEVA, Ye.P.,
kandidat sel'skokhozyaystvennykh nauk; RAKOVICH, M.L.

Differences in the activity of the potato wart pathogen. Dokl.
Akad.sel'khoz. 22 no.9:31-33 '57. (MLRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy.
Predstavlena sektsiyey zashchity rasteniy Vsesoyuznoy ordena Lenina
akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina.
(Potato wart)

RAKOVICH, M.I.

USSR/Plant Diseases - Disease of Cultivated Plants. 0-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, 68529

Author : Fedotova, T.I., Karasova, Yr.F., Rakovich, M.I.

Inst : All-Union Academy of Agricultural Sciences imeni V.I.
Lenin

Title : Variations in the Activity of the Potato Canker Agent.

Orig Pub : Dokl. VASKNIL, 1957, № 9, 31-33.

Abstract : Tests of the susceptibility of different potato varieties
to canker have demonstrated that the Synchytrium endobioticum populations of different geographical deviations
behave in different fashions. This is displayed according
to the degree to which the plants are infected. The
Chernovitskaya and Minskaya populations are more active
than the Leningradskaya and Vil'nyusskaya populations.
.... S.V. Gorlenko

Card 1/1

UL'YASHCHENKO, Vasiliy Yevgen'yevich, inzhener; RAKOVICH, I.O., redaktor;
VINOKUROVA, Ye.B., redaktor izdatel'stva; PETROVSKAYA, Ye.S.,
tekhnicheskiy redaktor

[Fire prevention measures for electrical equipment in installations
subject to fire and explosions] Pozharno-tekhnicheskie trebovaniya
k elektrooborudovaniyu pozharno-vzryvoopasnykh pomeshchenii i
naruzhnykh ustanovok. Moskva, Izd-vo M-va kommunkhoz. RSFSR, 1957.
88 p.

(MIRA 10:7)

(Electric machinery--Safety measures)
(Fire prevention)

RAKOVITSA, Yu.; MASLOV, A.; KALASHNIKOV, S. (g.Stanislav)

Letters to the editor. Voen. znan. 37 no.11:25 N '61.
(MIRA 14:11)

1. Chlen Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i
flotu, g. kitsman', Chernovitskoy obl. (for Rakovitsa). 2. Nachal'-
nik rayonnoy shkoly grazhdanskoy oborony, pos.Ordzhonikidze, Tash-
kentskoy oblasti (for Maslov).

(Military education)

RAKOVITSAN, A. P.

"An approximate account of arched bridges with sloped suspensions," Sbornik trudov
(Kievsk. inzh.-stroit. in-t), Issue 8, 1948, p. 264-75

SOT U-2850, 16 June 53, (letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

RAKOVITSAN, Aleksandr Petrovich, kand.tekhn.nauk, dots.; SAFRONEYEV,
Vladimir Borisovich, inzh.; LISEYEV, Vasiliy Pavlovich, dots.;
GONCHAR, A.S., red.; LEBEDEVA, L.A., tekhn. red.

[Design of reinforced-concrete engineering structures] Pro-
ektirovanie zhelezobetonykh inzhenernykh sooruzhenii. Kiev,
Gosstroizdat USSR, 1962. 366 p. (MIRA 15:7)
(Reinforced concrete construction)
(Hydraulic structures)

ACCESSION NO: AP3000219

S/0166/63/000/002/0044/0048

AUTHORS: Starodubtsev, S. V.; Begzhanov, R. B.; Rakovitskiy, S. B.

TITLE: Investigations of Hg¹⁹⁸ conversion electrons on beta-spectrometer with $\pi/2$ focusing

SOURCE: AN UzSSR. Izv. Seriya fiziko-matem, nauk, no. 2, 1963, 44-48

TOPIC TAGS: beta spectrometer, resolving power, transverse magnetic field, excitation level, conversion line, gamma radiation

ABSTRACT: The details of a beta-spectrometer BPP-3M with a double focusing system at $\pi/2$ focusing angles has been discussed. The authors claim it has a high resolving power with a transverse magnetic field range of 11.4 to 624 oersteds, capable of focusing electrons with 5.6 kev to 3.7 mev energies. The beta-spectrometer is used to study the β -decay of Au¹⁹⁸ to the first excitation level of Hg¹⁹⁸, which in turn decays to the ground state by emitting γ -radiation with 411.8 kev energy. The spectrometer is shown to record with good resolution the conversion lines L₁, M, and N-shells of Hg¹⁹⁸ generated by the gamma radiation. Comparing theoretical and experimental values, the transition energy of 411.8 kev in Hg¹⁹⁸ is found to have

Card 1/2

ACCESSION NO: AP3000219

an electric quadrupole nature. Orig. art. has: 3 tables and 3 figures.

ASSOCIATION: Institut yadernoy fiziki, AN UzSSR (Institute of Nuclear Physics
AN UzSSR)

SUBMITTED: 06Feb63

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH

NO REF SOV: 005

OTHER: 012

Card 2/2

STARODUBTSEV, S.V.; BEGZHANOV, R.B.; PAKOVITSKIY, S.L.

Nature of highly excited levels in W¹⁸². Zhur. eksp. i teor.
fiz. 45 no.4:921-926 O '63. (MIRA 16:11)

1. Institut yadernoy fiziki AN Uzbekskoy SSR.

ACCESSION NR: AP4002542

S/0166/63/000/005/0040/0044

AUTHORS: Starodubtsev, S. V.; Begzhanov, R. B.; Rakovitskiy, S. L.

TITLE: Multipolarity of gamma transitions in Sn¹¹⁶ accompanying beta decay of 54 min. In^{116m}

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matem. nauk, no. 5, 1963, 40-44

TOPIC TAGS: tin 116, indium 116m, gamma transition, beta decay gamma emission

ABSTRACT: The internal conversion of high energy γ -transitions in Sn¹¹⁶ accompanying beta decay of 54 min In^{116m} have been studied, correcting and extending previous investigations. Measurements were made on the β -spectrometer with double focusing at $\pi\sqrt{2}$ angle with a resolution, determined by K-line γ -radiation at 411.8 kev Hg¹⁹⁸, equal to 0.2%. The source used was indium oxide on aluminum foil, 1/mg /cm² in thickness applied to low intensity γ -transitions in the hard band. The results allow one to determine the angular momentum and the parity of high excitation levels, in Sn¹¹⁶, obtained from the β -decay 54 min In^{116m}. For the 2807 kev level the most probable magnitude was I = 4 and $\pi = +$ which confirms the measurements of γ -transition angular correlations of 1510 Mev and 1296 Mev. Orig. art. has: 3 figures, 2 tables, and 1 formula.

Card 1/0 ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics
AN UzSSR.)

S/0048/64/C28/001/0076/0079

AP4010295

AUTHOR: Starodubtsev,S.V.; Begzhanov,R.B.; Rakovitskiy,S.L.

TITLE: Concerning the high energy transitions in the decay of 54 min In^{116m} to Sn¹¹⁶ Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev, 25 Jan to 2 Feb 1963

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v.28, no.1, 1964, 76-79

TOPIC TAGS: γ -transition, conversion electron spectrum, indium-116m, indium isomer, multipole order, decay scheme.

ABSTRACT: Although the decay of the 54 min isomer of In¹¹⁶ has been investigated by several authors the available information on the γ -transitions departing from the high-lying levels in Sn¹¹⁶ is still scanty. The characteristics of these γ -transitions are of interest not only per se but also in connection with the theoretical investigations of L.S.Kisslinger (Mat.-fys.medd.danske vid.selskab., 32, 9, 19-60). In the present work there were measured the internal conversion coefficients of the high-energy γ -transitions in Sn¹¹⁶ with a view to obtaining information on these levels and amplifying the results of P.G.Hansen (Nucl.Phys., 30, 140, 1962) and

Card 1/3

AP4010295

R.K.Grigis (Physica, 25, 590, 1959). The measurements were carried out on a β^2 double focusing β -spectrometer with a resolution of 0.25%. The source was in the form of indium oxide deposited on an aluminum foil. For investigating the low intensity γ -transitions in the high-energy region there was prepared a special source with a thickness of 1 mg/cm². Irradiation in a neutron flux of 1.8×10^{13} cm⁻² sec⁻¹ for one hour yielded an activity of ~75 mC. The measurements were started within a few minutes after irradiation. Since in view of the short lifetime of In^{116m} it is impossible to measure more than two lines using one source, the lines were measured in pairs, each line being repeated in each successive pair. There were detected γ -rays with energies of 1100, 1296, 1511, 1760 and 2121 keV. The multipole order assignments for the 1100, 1296, 1511 and 2121 keV transitions are all E2. The 1760 keV transition may be either M2 or a mixture of E2 + M3. The decay scheme for 54 min In^{116m} proposed on the basis of the data in the literature and the results of the present investigation is shown in Fig.1 of the Enclosure. Orig.art.has; 1 formula, 3 figures and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk UzSSR (Inst. of Nuclear Physics
Academy of Sciences, Uzbek SSR)

SUBMITTED: OO

DATE ACQ: 10Feb64

ENCL: 01

SUB CODE: NS
Card 2/32

NR REF Sov: 001

OTHER: 007

L 15309-65 EWT(m) DIAAP
ACCESSION NR: AP4044795

S/0166/64/000/003/0071/0072

AUTHOR: Begzhanov, R. B., Rakovitakiy, S. Ya.

TITLE: The parameter of nonaxiality of deformed doubly even nuclei

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1964, 71-72

TOPIC TAGS: nonaxiality, ¹⁹deformed nucleus, doubly even nucleus, nonaxial nucleus, excitation state, nonaxial displacement

ABSTRACT: The authors report the preliminary results of experiments designed to determine the relationship between the energy of the first excitation state $E_1(2)$, the mass number A , and the parameter γ_0 which measures the degree of nonaxiality of a doubly even nucleus. These results confirmed those previously obtained showing that there is a linear relationship between these three variables in the region where $\gamma_0 < 24^\circ$. The study dealt with doubly even deformed nuclei in the range $A = 24-254$ atomic mass units, and the authors point out that the existence of a linear relationship between $E_1(2)$ and γ_0 in the region where $\gamma_0 < 15^\circ$ must be interpreted with care due to the scarcity of valid data. The experimental results are shown in Fig. 1. of the Enclosure. Orig. art. has: 1 figure and 1 formula.

Card 1/4

L 15309-65

ACCESSION NR: AP4044795

ASSOCIATION: Institut yadernoy fiziki AN UzSSR (Institute of Nuclear Physics, AN UzSSR)

SUBMITTED: 06Sep63

ENCL: 02

OTHER: 003

SUB CODE: NP

NO REF Sov: 001

SOURCE: AN (Soviet) (Evenlyt, G. I.)
Topic: Fission nonaxiality, deformed
excitation state, nonaxial displacement

ABSTRACT: The authors report the results of a study of doubly even nuclei ($A \leq 120$), the first excited nuclear state, the degree of nonaxiality of a deformed nucleus, β_2 , and the parameter β^*O which characterizes the degree of nonaxiality of a deformed even nucleus. These results confirm the previously obtained showing that there is a linear relationship between these three variables in the region where $A \geq 120$. The study dealt with doubly even deformed nuclei in the range $A = 112-136$. Atomization was used and the authors point out that the existence of a linear relationship between β_2 , β^*O and ΔC in the region where $\beta^*O > 15^\circ$ must be interpreted with care due to the possibility of valid data. The experimental results are shown in Fig. 1 of the literature. Only part 2 of the

Card 2/4

L 15309-65
ACCESSION NR: AP4044795

ENCLOSURE: 01

continued to
Enclosure 02



Card 3/4

L 15309-65 AP4044795
ACCESSION NR:

continuation
of Enclosure 01

ENCLOSURE: 02



Fig. 1. Dependence of $E(2) \cdot A$ on the parameter O . The open circles are taken from the paper by Sheline (Nucl. Phys., 31, 335, 1962); the dark points are original data.

Card 4/6

BEGZHANOV, R. B.; RAKOVITSKIY, S. L.

"Electric Quadrupole Transitions from the Level 3^+ of Even-Even Nuclei."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

IYaF AN UzSSR (Inst Nuclear Physics, AS UzSSR)

BEGZHANOV, R.B.; RAKOVITSKIY, S.L.; STARODUBTSEV, S.V.

E2-transitions from the 3 level of even-even nuclei. Izv.

AN Uz.SSR. Ser. fiz.-mat. nauk 9 no.5:36-48 '65.

(MIRA 18:11)

1. Institut yadernoy fiziki AN UzSSR. Submitted March 2, 1964.

L 25917-66 EWT(m) DIAAP

ACC NR: AP6016677

SOURCE CODE: UR/0166/65/000/005/0036/0048

AUTHOR: Begzhanov, R. B.; Rakovitskiy, S. L.; Starodubtsev, S. V.

22

ORG: Institute of Nuclear Physics AN UzSSR (Institut yadernoy fiziki AN UzSSR)

B

TITLE: E-2 transitions from the 3^+ level of even-even nuclei

19

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 5, 1965,
36-48

TOPIC TAGS: even even nucleus, nuclear model

ABSTRACT: It is of great importance in the testing and perfection of nuclear models to compare existing experimental data with the predictions of various theories. For instance, the theory of A. S. DAVYDOV and G. F. FILIPPOV (see, e. g., ZhETF [Journal of Experimental and Theoretical Physics] 35, 440, 1958; 36, 1497, 1959) predicts uniquely (as a function of the nonaxiality parameter) the relative positions of the rotational levels and the relative intensities of the E2-transitions. D. VAN PATTER (M. Nucl. Phys., 14, 42, 1959) carried out such a comparison for E2-transitions from the two first 2^+ excited levels for a large number of even-even nuclei. The present paper compares, on the basis of 98 references, the position of 3^+ levels and the ratios of the given probabilities of transitions from this level to the lower

Card 1/2

Z

L 25917-66

ACC NR: AP6016677

2⁺, 4⁺, levels with the predictions of various theories of the nucleus by DAVYDOV and FILIPPOV, BOHR, and MOTTELSON (see, e. g., Atomnaya energiya [Atomic Energy], 1963, No 14, 41), and by V.I. BELYAK, D. A. ZAIKIN, Izv. AN SSSR, seriya fizich. [Bulletin of the AS USSR, Physics Series], 25, 1163, 1961). Such a comparison was partially made earlier by Ye. P. GRIGOR'YEV and M.P. AVOTINA (Izv. AN SSSR, seriya fizich. 24, 324, 1960). Because of the limited amount of data at the time concerning the 3⁺ levels (only nine nuclei) and poor experimental accuracy of the numbers involved, these authors were not able to make pronouncements concerning the merits of the various theories. The present discussion shows that in spite of numerous favorable agreements, many experimental facts are still in disagreement with the above-mentioned nuclear theories. Orig. art. has: 3 figures, 9 formulas, and 1 table. [JPRS]

SUB CODE: 20 / SUBM DATE: 02Mar64 / ORIG REF: 027 / OTH REF: 071

Card 2/2 BIG

PISKUNOV, M., rabochiy; KATSNELENBOGEN, V. (Leningrad); RAKOVSHCHIK, A.
(Leningrad)

That is the way we live. Izctr. i rats. no.432 - '64. (MIRA 17/4)

1. Sovkhoz "Drichinskiy", Minskoy oblasti (for Piskunov).

RAKOVSHCHIK, L.S.

Theory of convolution type integral equations. Usp. mat. nauk 18
no.4:171-178 Jl-Ag '63. (MIRA 16:9)

RAKOVSHCHIK, L.S.

Boundary value problem for a second-order nonlinear differential equation. Uch. zap. Kar. ped. inst. 14:11-18 '63. (MIRA 17:3)

RAKOVSHCHIK, L.S.

Calculating the index of a system of almost difference-type
integral equations. Sib. mat. zhur. 5 no.4:904-909 Jl-Ag'64
(MIRA 17:8)

L 49289-65 EWT(d) IJP(c)

ACCESSION NR: AP5008401

AUTHOR: Rakovshchik, L. S.

TITLE: On an integral equation of the convolution type

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 6, no. 1, 1965, 186-198

TOPIC TAGS: integral equation, Fourier series

ABSTRACT: The equation

$$A\varphi = \varphi(t) - \int_{-\infty}^t k_i(t-s)\varphi(s)ds = f(t), \quad a_1 < t < a_{i+1}$$

$-\infty = a_1 < a_2 < \dots < a_n < a_{n+1} = \infty$.
 may, under certain limiting conditions, be reduced to an equation of the Wiener-Hopf type on the semi-axis. The author treats the case when $n = 3$, since generalization for higher values of n does not introduce new problems. Theorem 1 establishes (a) that the index of equation (1) in any space L_p is found by the formula

$$\chi_1 = \frac{1}{2\pi} \operatorname{Arg} \frac{1 - K_1(\lambda)}{1 - K_3(\lambda)}$$

where $K_i(\lambda)$ is the Fourier transform of the function $k_i(t)$; (b) that if the index

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 x_1 is non-negative equation (1) is solvable for any right side $f(t) \in L_p(-\infty, \infty)$.
The corresponding homogeneous equation has exactly χ_1 linearly independent solutions
and, consequently, the conjugate homogeneous equation has only a trivial solution;
(c) that if $\chi_1 < 0$, then the homogeneous equation of (1) has only a trivial solution
and the conjugate equation exactly $|x_1|$ linearly independent solutions. The non-
homogeneous equation (1) is solvable only for right members $f(t)$ orthogonal to all
solutions of the conjugate homogeneous equation. An explicit expression for the
solution of (1) is given. Orig. art. has: 58 formulas

ASSOCIATION: none

SUBMITTED: 31Jan64

NO REF Sov: 004

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L 04169-67 EWT(d) IJP(c)
 ACC NR: AT6026779

SOURCE CODE: UR/2857/66/000/063/0069/0077

AUTHOR: Rakovshchik, L. S.

27
B7 /

ORG: none

TITLE: An effective solution of certain convolution type equations

SOURCE: Leningrad. Inzhenerno-ekonomicheskiy institut. Trudy, no. 63, 1966. Nekotorye klassy poluporjadochennykh prostranstv (Certain classes of partially ordered spaces), 69-77

TOPIC TAGS: Fourier transform, differential equation solution, differential operator, constant coefficient

ABSTRACT: This article presents an elementary method of solving equations of the form

$$\Lambda \varphi = \varphi(t) + \sum_{j=1}^n b_j(t) \int_{-\infty}^t n_j(t-s) \varphi(s) ds = f(t) \quad (1)$$

with piecewise constant coefficients $b_j(t)$ and kernels $n_j(t)$ summable over the entire axis which have rational Fourier transforms. These equations are of interest since they are often encountered in applied problems and, furthermore, can be used for the investigation and approximate solution of equations of type (1) with arbitrary coefficients and kernels. This article shows that if the zeros and poles of the rational functions $1 \pm K_j(\lambda)$ are known, then Eq. (1)

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is solved by the same procedure as that used for equations with degenerate kernels. It is pointed out in conclusion that the proposed method can be applied without any changes to equations also containing differential operators L with constant coefficients. For this purpose it suffices that the differential operators are presented in the form $L[\Psi] = L[\delta] \cdot \Psi$ and to note that the Fourier transform of the generalized function $L[\delta]$ is rational. Orig. art. has: 22 formulas.

SUB CODE: 12/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002

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ACCESSION NR: AP4011317

S/0103/64/025/001/0023/0029

AUTHOR: Rakovshchik, L. S. (Petrozavodsk)

TITLE: Synthesizing permissible controls. Part 2

SOURCE: Avtomatika i telemekhanika, v. 25, no. 1, 1964, 23-29

TOPIC TAGS: automatic control, automatic control theory, piecewise constant control, automatic control synthesis, permissible automatic control synthesis

ABSTRACT: This is a continuation of the author's previous investigation (Avtomatika i telemekhanika, v. 23, no. 10, 1962). For a plant described by this vector equation $\frac{dx}{dt} = f(t, x, u)$, in which x , u , t mean the vectors (u_1, u_2, \dots, u_n) and (x_1, x_2, \dots, x_n) ; $(f(t, x_1, \dots, x_n, u_1, \dots, u_n), \dots, f(t, x_n, u_1, \dots, u_n))$, respectively, finding the piecewise-constant control $u = u(t)$ is required which would provide for a continuous and piecewise-smooth solution $x = x(t)$ of the above vector equation and satisfy these

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conditions: $x(t_0) = x_0$, $x(T) = X$. Besides, the control $u = u(t)$ should satisfy the condition: $|u_i(t)| \leq N$, $N = \text{const} > 0$ with $i = 1, 2, \dots, n$; $t_0 < t < T$. Sufficient conditions are found which transfer the plant from a specified initial position to a specified final state. The differential equations describing the plant depend in an arbitrary way on the controlling parameters. Orig. art. has: 40 formulas.

ASSOCIATION: none

SUBMITTED: 04Nov62

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NO REF SOV: 003

OTHER: 000

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RAKOVSHCHIK, L.S. (Petrozavodsk)

Construction of permissible control. Avtom.i telem. 23
no.10:1277-1283 0 :62. (MIRA 15:11)
(Automatic control)

RAKOVSHCHIK, L. S.

RAKOVSHCHIK, L. S.: "The approximation solution of certain classes of functional equations based on the method of Academician S. A. Chaplygin." Tomsk State University imeni V. V. Kuybyshev. Tomsk, 1955
(Dissertation for the degree of Candidate in Physicomathematical Sciences)

SO: Knizhnaya Letopis', No 36, 1956, Moscow.

RAKOVSHCHIK, L.S.

Integral equations with almost difference kernels [with summary
in English]. Vest. LGU no.13:52-72 '61. (MIRA 14:7)
(Integral equations)

AUTHOR: RAKOVSHCHIK, L.S.

20-3-6/52

TITLE: A Condition for the Unlimited Applicability of the Theorem of S. A. Chaplygin on Inequalities to Systems of Differential Equations of the First Order (Ob odnom uslovii neogranichennoy primenimosti teoremy S.A.Chaplygina o neravenstvakh k sistemam differentsial'nykh uravneniy pervogo poryadka)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 117, Nr. 3, pp. 378-379 (USSR)

ABSTRACT: Given the system of equations

$$(1) \quad y'_i = f_i(x, y_1, y_2, \dots, y_n)$$

with the initial conditions

$$(2) \quad y_i(x_0) = y_{i0}.$$

Let the functions f_i be continuous in D and let them there in y_1, \dots, y_n satisfy the Lipschitz condition with the constant K.

Theorem: Let the functions u_1, u_2, \dots, u_n for $x \in [x_0, x_1]$ satisfy the initial conditions (2) and the inequations $u'_i - f_i(x, u_1, u_2, \dots, u_n) > 0$ (≤ 0). Let $\tilde{u}_i = u_i + \gamma_i$ ($\tilde{u}'_i = u'_i - \gamma'_i$), where $\gamma_1, \gamma_2, \dots, \gamma_n$

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A Condition for the Unlimited Applicability of the Theorem of
S. A. Chaplygin on Inequalities to Systems of Differential Equations
of the First Order 20-3-6/52

is the solution of $\eta'_i - K \sum_{r=1}^n \eta_r = |u'_i - f_i(x, u_1, \dots, u_n)|$ vanishing
for $x = x_0$ and y_1, y_2, \dots, y_n is the solution of (1) which

satisfies (2).

Then from $|\psi'_i - f_i(x, \vartheta_1, \vartheta_2, \dots, \vartheta_n)| \leq |u'_i - f_i(x, u_1, \dots, u_n)|$
on the whole interval $[x_0, x_1]$ there follows the inequation
 $u_i \geq y_i$ ($u_i \leq y_i$).

4 Soviet references are quoted.

ASSOCIATION: Novosibirsk Electrotechnical Institute (Novosibirskiy
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Card 2/2

RAKOVSHCHIK, L.S. (Petrozavodsk)

Construction of permissible controls. Avtom. i telem. 25 no.1:23-29
Ja '64. (MIRA 17:2)